

Amendments to the Specification

Please amend the specification as follows.

[007] In the field of telecommunications, one of the most important constraints in designing telecommunication systems is that of power consumption. Telecommunication systems, embodied in printed circuit boards, typically have a maximum power budget of between 100W and 120W. The maximum allowable power is in part constrained by the ability to cool the system – the mean time before failure (MTBF) decreases with an increase in operating temperature. The MTBF is calculated as an average time interval, usually expressed in thousands of tens of thousands of hours, that a hardware component fails and requires service. Although many devices are often found on a printed circuit board, the switch fabric component often consumes the majority of the power. As power consumption will increase along with the switch capacity, it is important to reduce power consumption of the switching component to enable the design of large switching systems. Moreover, as power consumed by large switching ~~systems~~ system chips results in digital noise, the reduction in power consumption will result in the reduction of digital noise.

[0013] One switch architecture[,] is an egress selection switch (ESS) block architecture. The ESS architecture is composed of one ESS block for each egress port. The ESS switch architecture is an output buffered memory switch. An output memory buffered switch, known in the art, resolves contention from egress ports by connecting each ingress port to every egress port. Each egress port then selects and stores only the data of interest for subsequent output. The power consumption of an ESS architecture, and similar switch architectures, is dominated by the toggling of the wires and the connections required to transmit data from each ingress port to every egress port. Such systems are power inefficient as each egress port receives data from all N ingress ports but selects at most 1/Nth of the data for output.

[0085] According to the present invention, the ingress and egress data disable methods provide a combined power management scheme that reduces average power consumption. This reduction is accomplished by enabling the propagation of only those grains or subset of grains that are selected for egress through the fanout tree. Accordingly, the level of power required is averaged over a grain group period. However, the instantaneous power for a

specific timeslot within a grain group may be considerably higher than the average – this can occur if the switch settings are programmed such that a large percentage of the fanout tree is enabled. As explained previously with reference to FIGURES 5 and 6, a significant current spike will occur if the data in the fanout tree toggles from an “all zeroes” pattern in the timeslot preceding preceding the enabled timeslot to an “all ones” pattern during the enabled timeslot, or vice versa. To eliminate such spikes, the present invention provides a disabled data constant overwrite method.